

What is claimed is:

1 1. A method for the production of olefin product from an oxygenate-
2 containing feedstock, comprising:
3 exposing a molecular sieve catalyst to an oxygenate-containing
4 feedstock in a reaction zone under conditions effective to convert the oxygenate-
5 containing feedstock to an olefin product;
6 stripping at least a portion of the exposed catalyst with a stripping
7 gas; and
8 returning at least a portion of the stripped catalyst to the reaction
9 zone without regenerating.

1 2. The method of claim 1, further comprising regenerating at least a
2 portion of the stripped catalyst and returning at least a portion of the regenerated
3 catalyst to the reaction zone.

1 3. The method of claim 1, wherein a ratio defined by time of exposing
2 the catalyst to the oxygenate containing feedstock to time of stripping the exposed
3 catalyst with the stripping gas is from 1:1 to 20:1.

1 4. The method of claim 1, wherein a ratio defined by time of exposing
2 the catalyst to the oxygenate containing feedstock to time of stripping the exposed
3 catalyst with the stripping gas is greater than 20:1.

1 5. The method of claim 1, wherein the stripping gas is selected from
2 the group consisting of steam, nitrogen, air, helium, argon, methane, carbon
3 dioxide, carbon monoxide, flue gas, hydrogen, and combinations thereof.

1 6. The method of claim 1 wherein the stripping gas comprises steam.

1 7. The method of claim 6 wherein the stripping gas flows at a rate of
2 1 to 10 lbs per hour per 1000 lbs of catalyst per hour.

1 8. The method of claim 7 wherein the stripping gas flows at a rate of
2 1 to 4 lbs per hour per 1000 lbs of catalyst per hour.

1 9. The method of claim 1, wherein the stripped catalyst is stripped in
2 a separate unit apart from the regenerator.

1 10. The method of claim 1, wherein the stripping of the exposed
2 catalyst removes at least 25% of the hydrocarbons adhered thereto.

1 11. The method of claim 1, wherein the stripping of the exposed
2 catalyst removes at least 50% of the hydrocarbons adhered thereto.

1 12. The method of claim 1 wherein the stripped catalyst contains less
2 than 10% by weight of hydrocarbons selected from the group consisting of
3 olefins, aromatics, parafins, oxygenates, and mixtures thereof.

1 13. The method of claim 1, wherein the oxygenate-containing
2 feedstock comprises at least one compound selected from the group consisting of
3 methanol; ethanol; n-propanol; isopropanol; C₄ - C₂₀ alcohols; methyl ethyl ether;
4 dimethyl ether; diethyl ether; di-isopropyl ether; formaldehyde; dimethyl
5 carbonate; dimethyl ketone; acetic acid; and mixtures thereof.

1 14. The method of claim 1, wherein the molecular sieve catalyst
2 comprises a silicoaluminophosphate molecular sieve and a binder.

1 15. The method of claim 14, wherein the silicoaluminophosphate
2 molecular sieve is selected from the group consisting of SAPO-5, SAPO-8,
3 SAPO-11, SAPO-16, SAPO-17, SAPO-18, SAPO-20, SAPO-31, SAPO-34,
4 SAPO-35, SAPO-36, SAPO-37, SAPO-40, SAPO-41, SAPO-42, SAPO-44,
5 SAPO-47, SAPO-56, metal containing forms thereof, and mixtures thereof.

1 16. The method of claim 14, wherein the silicoaluminophosphate
2 molecular sieve has a Si:Al atomic ratio of at least 0.30.

1 17. The method of claim 1, wherein the reaction zone comprises
2 temperatures of about 350 to 550 °C while exposing the molecular sieve catalyst
3 to the oxygenate-containing feedstock.

1 18. The method of claim 1, wherein the oxygenate-containing
2 feedstock contacts the molecular sieve catalyst in the reaction zone at an average
3 gas superficial velocity of greater than 1 meter per second.

1 19. An olefin product made according to the method of claim 1.

1 20. The method of claim 1, further comprising contacting the olefin
2 product with a polyolefin-forming catalyst under conditions effective to form a
3 polyolefin.

1 21. A polyolefin made by the process of claim 20.